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random by mobile station 6. In the exemplary embodiment, the access channel is time multiplexed with the DRC channel.

In the exemplary embodiment, the access channel transmits messages in access channel capsules. In the exemplary embodiment, the access channel frame format is identical to that specified by the IS-95 standard, except that the timing is in 26.67 msec frames instead of the 20 msec frames specified by IS-95 standard. The diagram of an exemplary access channel capsule is shown in FIG. 7B. In the exemplary embodiment, each access channel capsule 712 comprises preamble 722, one or more message capsules 724, and padding bits 726. Each message capsule 724 comprises message length (MSG LEN) field 732, message body 734, and CRC parity bits 736. XVII. Reverse Link NACK Channel

In the present invention, mobile station 6 transmits the NACK messages on the data channel. The NACK message is generated for each packet received in error by mobile station 6. In the exemplary embodiment, the NACK messages can be transmitted using the Blank and Burst signaling data format as disclosed in the aforementioned U.S. Pat. No. 5,504,773.

Although the present invention has been described in the context of a NACK protocol, the use of an ACK protocol can be contemplated and are within the scope of the present invention.

The previous description of the preferred embodiments is provided to enable any person skilled in the art to make or use the present invention. The various modifications to these embodiments will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other embodiments without the use of the inventive faculty. Thus, the present invention is not intended to be limited to the embodiments shown herein but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

What is claimed is:

1. A method for wireless communication, comprising: measuring channel quality of a communication link in a wireless communication system, wherein the measuring channel quality comprises periodically measuring the channel quality of the communication link in each of a plurality of time periods; determining a quality indicator based on the measured channel quality; transmitting the quality indicator to a base station, wherein the transmitting the quality indicator comprises periodically transmitting the quality indicator in each of the plurality of time periods; and receiving from the base station a data packet having a variable packet size determined based on the quality indicator.
2. The method of claim 1, wherein the quality indicator has one of a set of possible values, and wherein one of a set of supported packet sizes is selected based on the value of the quality indicator.
3. The method of claim 1, wherein the variable packet size is determined based further on an amount of resources used to transmit the data packet.
4. The method of claim 1, wherein the receiving a data packet comprises receiving the data packet sent using a modulation format determined based on the quality indicator.
5. The method of claim 1, wherein the quality indicator has one of a set of possible values, and wherein each of the set of possible values of the quality indicator is associated with one of a set of supported data rates.

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6. The method of claim 1, wherein the receiving a data packet comprises receiving the data packet in a variable number of time slots determined based on the quality indicator.

7. The method of claim 1, wherein the data packet is associated with an overhead of a fixed size.

8. The method of claim 1, further comprising:

receiving a pilot from the base station, and wherein the measuring channel quality comprises measuring the channel quality of the communication link based on the received pilot.

9. An apparatus for wireless communication, comprising: at least one processor configured to:

measure channel quality of a communication link in a wireless communication system, wherein the at least one processor is configured to periodically measure the channel quality of the communication link in each of a plurality of time periods;

determine a quality indicator based on the measured channel quality;

send the quality indicator to a base station, wherein the at least one processor is configured to periodically send the quality indicator in each of the plurality of time periods; and

receive from the base station a data packet having a variable packet size determined based on the quality indicator.

10. The apparatus of claim 9, wherein the quality indicator has one of a set of possible values, and wherein one of a set of supported packet sizes is selected based on the value of the quality indicator.

11. The apparatus of claim 9, wherein the at least one processor is configured to receive the data packet sent using a modulation format determined based on the quality indicator.

12. The apparatus of claim 9, wherein the at least one processor is configured to receive the data packet in a variable number of time slots determined based on the quality indicator.

13. The apparatus of claim 9, wherein the data packet is associated with an overhead of a fixed size.

14. An apparatus for wireless communication, comprising: means for measuring channel quality of a communication link in a wireless communication system, wherein the means for measuring channel quality periodically measures the channel quality of the communication link in each of a plurality of time periods;

means for determining a quality indicator based on the measured channel quality;

means for transmitting the quality indicator to a base station, wherein the means for transmitting the quality indicator periodically transmits the quality indicator in each of the plurality of time periods; and

means for receiving from the base station a data packet having a variable packet size determined based on the quality indicator.

15. The apparatus of claim 14, wherein the quality indicator has one of a set of possible values, and wherein one of a set of supported packet sizes is selected based on the value of the quality indicator.

16. The apparatus of claim 14, wherein the means for receiving a data packet comprises means for receiving the data packet sent using a modulation format determined based on the quality indicator.

17. The apparatus of claim 14, wherein the means for receiving a data packet comprises means for receiving the data packet in a variable number of time slots determined based on the quality indicator.